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ABSTRACT

This research paper advocates that there is no apparent common language among museum exhibit literature that will facilitate those wishing to develop a display. The development process of a display is the same, regardless of the items on display. To address this problem of a common terminology, the recommendations need to be developed for a model to give structure to understanding of an idea and allow individual to deal with the relationships of concepts in visual terms. The first section of this paper briefly discusses four existing models: (1) Koran Jr., Longino and Shafer; (2) Miles, Alt, Gosling, Lewis, and Tout; (3) Velarde; and (4) Hall. The second section of the paper offers a model that focuses on the exhibit's communication process. This model is based on a holistic approach to the exhibit development process and recognizes the activities of all participants in the process, rather than a select group. The model also employs contributions from psychology, education, and communication in addressing the issues of message transmission. The terminology used in the model is drawn from the literature and is frequently the most common denominator that describes a concept. (EH)

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TOWARD A MODEL OF EXHIBIT DEVELOPMENT

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Whether paintings, biological specimens, graphs, diamonds, photographs, or track shoes are displayed in an exhibit, its development process remains basically the same. Within this process, there is a need to formulate concepts, communicate ideas, and transfer images from one individual to another, from one team to another, from one organization to another. This is difficult, if not impossible, when the participants do not share a common terminology. In reviewing museum exhibit literature, it is apparent there is no such common language.

One way of generating a set of related terms is by developing a model. A model gives structure to our understanding of an idea, and often allows us to deal with the relationships of concepts in visual terms. The first section of this paper briefly discusses four existing models (Koran Jr., Longino, & Shafer, 1983; Miles, Alt, Gosling, Lewis, & Tout, 1982; Velarde, 1984; Hall, 1987), while the second section offers a model that is focused on the exhibit's communication process. This model also is based on a holistic approach to the exhibit development process and recognizes the activities of all participants in the process rather than a select group. At the same time, it employs contributions of psychology, education, and communication in addressing the issues of message transmission. The terminology used in the model is drawn from the literature and is frequently the most common demoninator that describes a concept.

Review of Previous Models

Model One

Koran Jr., Longino, and Shafer (1983) create a taxonomy which classifies the variation between static and dynamic didactic exhibits as shown in Figure 1. Passive case displays are placed on one end, and interactive hands-on exhibits on the other, while a third type, walk-through exhibitions, are positioned around the mid-point. This classification is based on the association of various design characteristics including the type of supplied information, media, and the methods of visitor stimulation and interaction.

Figure 1
Exhibit Taxonomy by
Koran, Jr., Longino, & Shafer

static	walk-through	dynamic

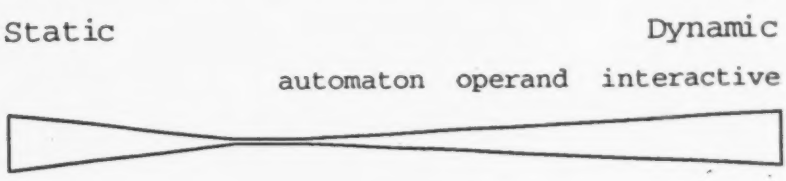
However, there is a difficulty with this classification. The failure to show that a direct, firm association exists among the characteristics means there is no basis for the suggested classification system. Message content is affected by exhibit development, and both are likewise affected by communication media, but there is no direct interrelationship as is intimated, although certainly a looser relationship at a higher level does exist among the parts. That is, message content, exhibit structure, artifact placement, along with everything else are derived from the exhibit's goals and objectives. However, since

this structure exists in all situations its presence is of no value in exhibit classification.

Model Two

Unlike the previous effort, Miles, Alt, Gosling, Lewis, & Tout (1982) in "The Design of Educational Exhibits" limit their system to formal didactic exhibits and they contend aspects of exhibit design such as lighting, sequencing, graphics, object selection, labels in this type are too numerous to classify, so they focus their exhibit taxonomy on the movement or lack of movement in an exhibit, and how that movement is controlled. As a result, their system has four types of displays "static, automaton, operand, and interactive" as shown in Table 2.

Figure 2
Exhibit Continuum by Miles, et al.



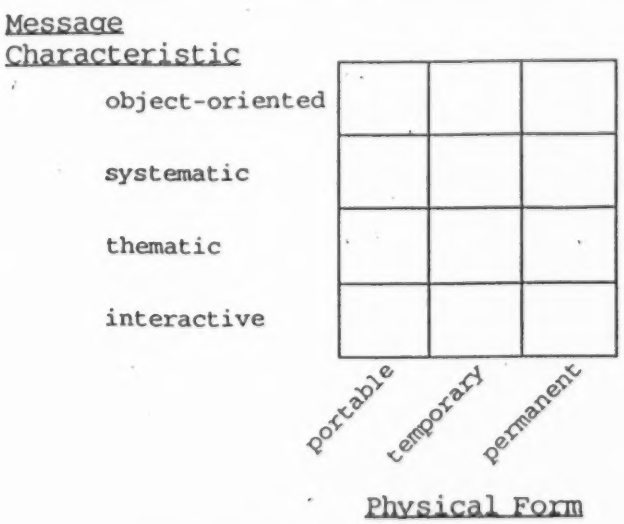
The problem is, that while the system proposed by Miles and his collaborators is interesting, it is illogical to say there are too many variables in exhibits and so they should be ignored. The value in dealing with these elements is not so much in their labeling and classification, but in the identification and

evaluation of the relationship that exists between them. Thus, a model will be of greater value if it can be shown that one element positively or adversely affects another.

Model Three

Giles Velarde, in Thompson's excellent work, "Manual of Curatorship" (1984) outlines a model based on two concerns: informative characteristics and physical forms, as shown in Table 3. He states one or all of the types of informative characteristics can be found in a single exhibit. It is this writer's contention that this is due to an error in function identification. While the terms he uses are aspects of the communication process, they are not salient characteristics. That is, the terms thematic and systematic relate to the communication's structure, object-oriented refers to the exhibit's goals, while interactive is a catch-all phrase dealing with the communication's transmission.

Figure 3
Velarde's Model of Exhibit Design



In the second part of the classification, Velarde places unnecessary emphasis on an exhibit's physical form. The fact that an exhibit is portable is an important limiting factor in its development, but at the same time, so is the budget, subject matter, facilities, and a host of other factors. The mobility and other physical properties of an exhibit are determined by its purpose, goals, and objectives, not the other way around.

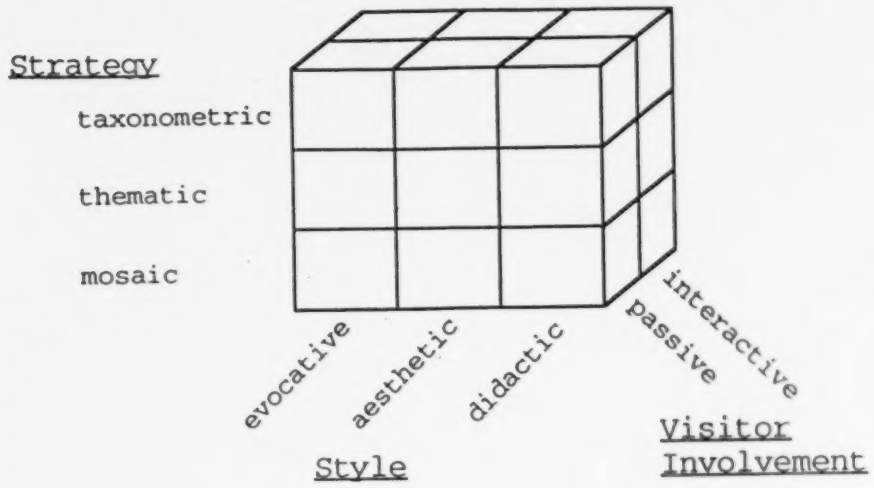
As a result of the previous discussion, it is apparent that once a model correctly recognizes the relationships of the various exhibit elements, it must also identify the significant factors that influence the development process.

Model Four

Hall (1987) presents a model that is process-oriented, and focuses on the decisions of the designer. As with Velarde's model, it is concerned with a series of factors that affect the exhibit's design as opposed to its total development. The factors on which she focuses include the exhibited material, the exhibit's location and whether it is going to be permanent, temporary or traveling.

Hall's model is different from the others in that she creates a three-part classification system as shown in Figure 4. The first part is based on organizational techniques termed taxonometric, thematic, or mosaic strategies. The second means of classification is visitor involvement, which she divides into passive or interactive forms. The final classification technique

Figure 4
Hall's Model of Exhibit Design



is the exhibit's style. These include evocative, aesthetic, and didactic types. Thus, an exhibit can be evocative/passive/taxonometric, or didactic/interactive/thematic or some other combination. This model allows exhibit characteristics to exist on their own continuums, and so they can be addressed and manipulated individually with the understanding that changes in one characteristic affects the others.

There are, however, three basic difficulties with the model. The first problem involves her terminology and classification. Some of the terms Hall uses are vague. For instance, it is difficult to determine if the taxonometric strategy is limited to scientific groupings, or if it allows for the art-in-isolation approach as well. In addition, it is felt some terms are inappropriately used. The terms aesthetic and didactic reflect

the purpose for which the exhibit was created and not the artistic style.

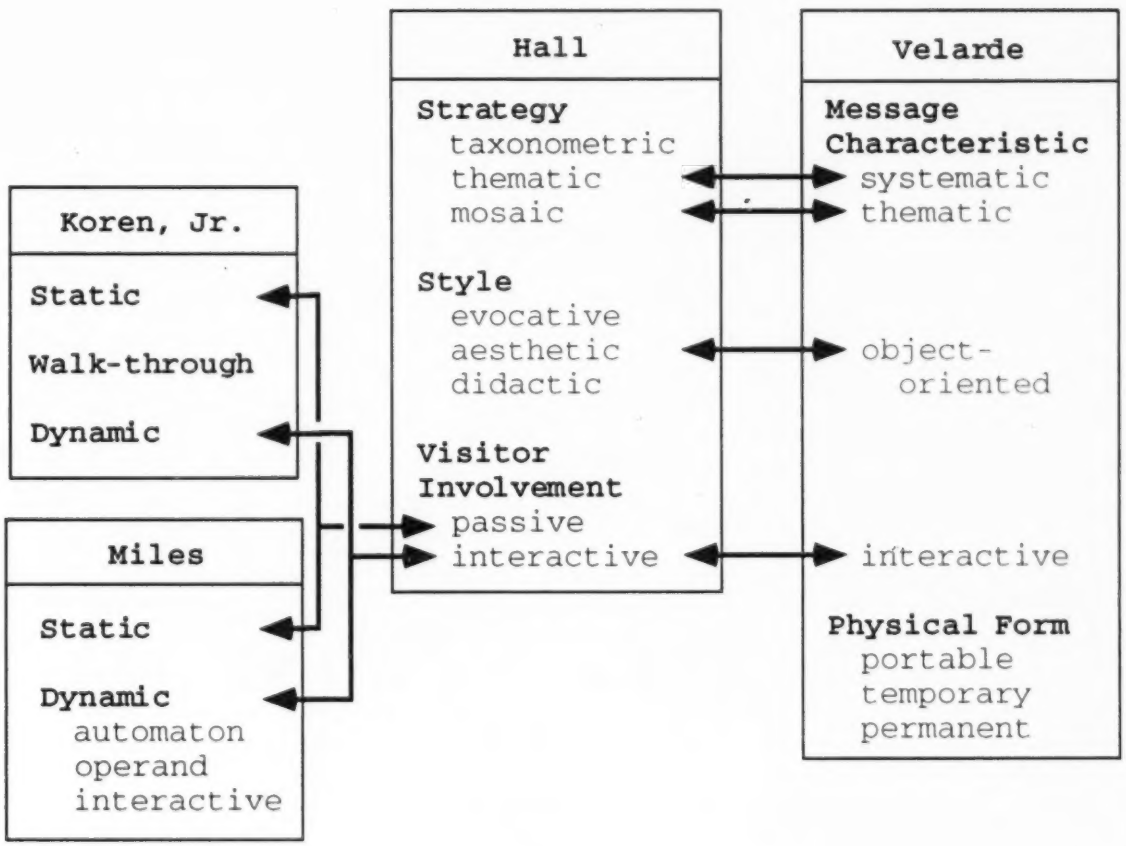
The second problem is that Hall uses the activities of the visitor as a means of classifying exhibits. However, those activities are not independent from the other factors as she envisions. Instead, visitor involvement is a result of first, the philosophical approach used in developing the exhibit, second, the structure of the exhibit, and third, the mode of communication used in presenting information.

The third difficulty with the model is more general in nature. Hall focuses on the designer and her/his problems. While a model must be selective in its inclusion of factors and relationships, the development of an exhibit reflects the concerns of many people other than the designer. These concerns must also be recognized and included in the process. Plainly put, an accurate exhibit development model should be useful to everyone involved in the process.

Summary

Figure 5 indicates there are a variety of common points within these four models. For instance, visitor involvement is acknowledged as an important part in the communication process, but each deals with it in a different manner. Even though the models of Koren, Jr., et al and Miles, et al use visitor activity as their sole classificatory characteristic, the first is visitor-oriented and the other is exhibit-oriented. Hall, on the

Figure 5.
Common Points in Reviewed Models



other hand, sees visitor involvement as an independent characteristic, while Velarde maintains it is one type of message characteristic.

This review also indicates the models all consider important activities in the development of exhibits, but none consider the entire process. The failure to adopt a holistic approach leads to problematic conclusions. For instance, the sole concern of the first two models and a major part of the last two is to classify exhibits according to exhibit/visitor interaction. In reality, they are addressing methods of transmitting factual information from the former to the latter. In this respect, such information is equated with the totality of the visitors' communication with the exhibit. However, this is not always the case. People can be entertained, inspired, amused, and challenged from an exhibit, in addition to learning through several different channels. An individual's knowledge is the sum of his/her experience. Therefore, to classify an exhibit according to one type of learning is to ignore its other facets.

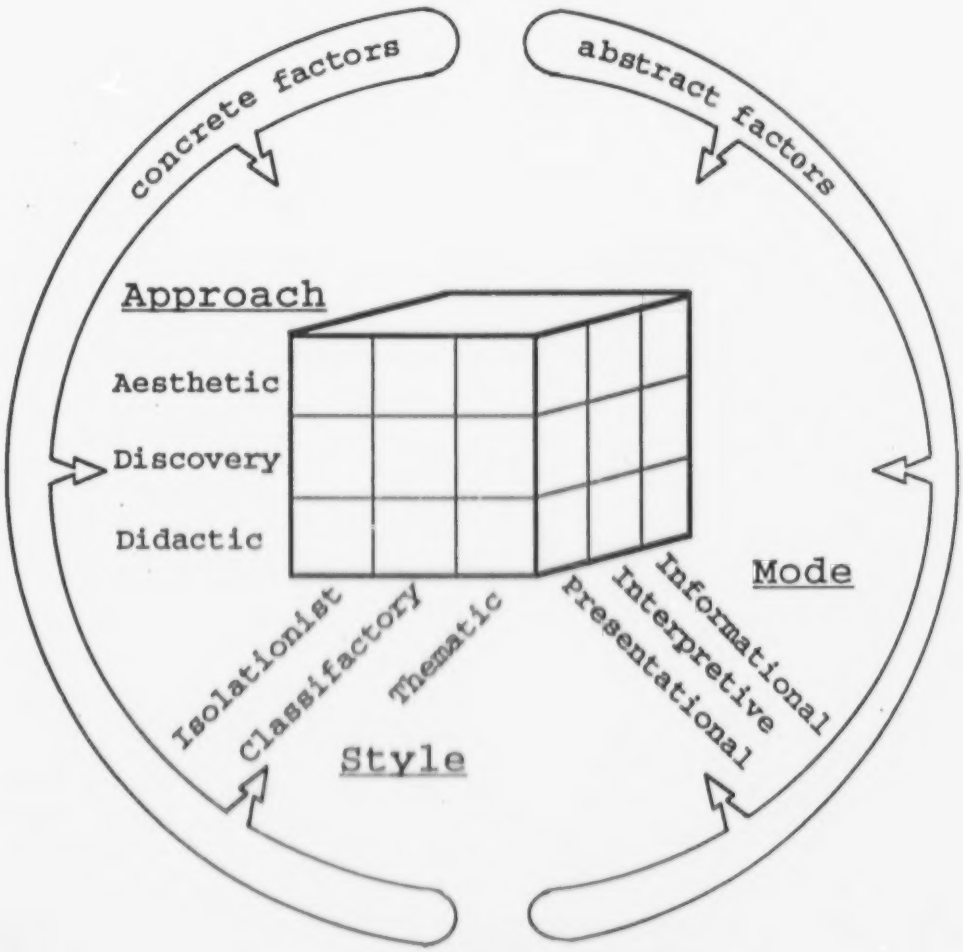
A Proposed Model of Exhibit Design

This model is designed to indicate relationships between the various forces within a museum. Because there are many factors involved, and they vary in their importance from situation to situation, it is impossible to define exact borders for the model. On the contrary, it is helpful to retain a flexible structure while focusing on a consistent goal. The terms used in

the model are not intended to be exact definitions, rather they are foci and their attributes may vary at different times. While exhibit development cannot be reduced to a formula, this model compares the interrelationships of design elements with those of chemical elements, (see Figure 6). Just as it is useful to classify chemicals into acids, metals and bases, it is useful to classify exhibit elements into approach, style, and mode. These are based on the communication process taking place between the message formulators--the museum staff, and the message receivers--the visitors. The approach is the philosophical basis of the exhibit and should reflect the goals, the mission, of the museum. In a sense, the exhibit's approach asks, "what is the purpose of the message; what do you want to accomplish with it?" Secondly, style is the organizing schema, the system of symbols, around which the exhibit is designed and which reflects the aims of the approach. Style asks the question, "What is the message's structure?" The third family, mode, is concerned with the medium of the exhibit's communications. This final concept asks, "How is the message transmitted?" The meaning, the structure, and the medium of exhibit communication play the same roles as they do in language. Obviously each affects the others, but their functions remain consistent.

Within each of these families there are individual elements. Each serves the same overall purpose as the other members within its family, but does so in a different way. It is perhaps best to place these elements on continuums, keeping in mind that each is very different from the others. The elements of the families

Figure 6.
Model of Exhibit Elements
and Factors



can be made to interact--the outcome differs for each interaction. A representative from each of the three families must be included to form an effective exhibit. A window display or a Disneyland experience reflects the absence of one or more families.

There are also factors that influence the development process. These factors can be divided into two groups. Some of these factors, such as the available funding, are quantitative because they can be measured and compared. The second group of factors are abstract or qualified in form and are less easily measured. These include, but are not limited to, the museum's goals and objectives; political forces both within and outside the museum; the exhibit development participants; the decision-making process itself; and the exhibit's subject matter or theme.

Elements of Exhibit Design

Exhibit Approach

Museums are primarily intended to be educational in nature. As an extrapolation of the museum's goals, an exhibit's approach reflects this focus, however, each approach is concerned with a different type of knowledge. According to Kneller (1963) knowledge can be divided into five different types. These are revealed, authoritative, intuitive, rational, and empirical. Revealed knowledge deals with spiritual revelation, while rational knowledge is abstract and relates to pure reason and logical inferences. Both are valuable types of learning, but not

pertinent to museum exhibitions. This model is concerned with the communication of the remaining three. Intuitive knowledge relates to the aesthetic approach, authoritative knowledge to the didactic approach, and empirical knowledge to the discovery approach.

Aesthetic Approach. The aesthetic approach allows visitors to react to and interact and communicate intuitively with works of art. Advocates of this approach believe insight is more important than a quantity of supplied information (Lee and Henning, 1975; Hamilton, 1975; Johnstone, 1980; Noble, 1984). Because a person's aesthetics are subjective and grounded in a mental image of reality, the exhibit experience is not and need not be the same for all viewers since they interpret the object according to their own sense of reality.

Didactic Approach. The goal of the didactic approach is to impart authoritative knowledge. The approach is related to the classical idealist philosophy that a teacher, in this case the museum's curator or design team, imparts important knowledge to the learner or viewer. The purpose of this knowledge is to build a mental reality. Therefore, the more one knows, the more complete a reality one will be able to build.

Discovery Approach. This approach has its origins in the physical sciences. Because its goal is to encourage the discovery of empirical knowledge, this goal refers to that knowledge which is gained through the senses. Through observation individuals can test their understanding of reality, refining it as they meet new situations. Both insight and factual

information that a person gains are necessary when dealing with empirical knowledge.

Exhibit Style

Style is a scheme visualized from the goals and objectives established early in the development process. It is concerned with the conceptual structure of exhibit communication. Style not only affects the physical configuration of the exhibit, but also the symbolic patterning of its message. The exhibit's motif, its flow, the relationship between artifacts, the colors, the type of exhibit cases, and so on, are all influenced by its style. All these and many other aspects of the exhibit are ramifications of its goals and objectives. In this model there are three terms that describe the more common interpretations of style: isolationist, classificatory, and thematic.

Isolationist Style. Using this style the object is removed from its original environment thus allowing the museum to become its setting. Objects such as the Declaration of Independence, a sculpture, a painting, or other things are often placed in isolation so that they receive the viewer's undivided attention, thus allowing the communication of the object's intrinsic message to the viewer (Cameron, 1968; Shettel, 1973; Waddell, 1984). The isolationist style is described by Velarde (1984, p. 396) as "often associated with one, or a collection of, fine objects not laid out in any system; it is simply the preferred order."

Classificatory Style. The classificatory style may be thought of as the traditional approach to exhibit design. Within

this style objects having a common characteristic are placed together. Thus, arrowheads, coins, bath tubs, etc. are displayed simultaneously to show changes that have taken place over time or variations within a group. This means the thrust of the exhibit communication effort is removed from the individual object and is refocused on the subtle variations among the objects. While this exhibit style has fallen under heavy criticism, there are those who maintain it has a definite value to certain groups of visitors (Swauger, 1969).

The classificatory element is the same as Velarde's systematic characteristic and Hall's (1987) taxonometric strategy. Of this style Velarde says, "it is evolved around a specific system of classification. Cases are laid out according to a classical order, or in order of the age of the objects" (1984, p. 396).

Thematic Style. The thematic style places an object in some type of context. This context may be historical, sociological, geographical, cultural, or any other environment that supplies meaning to the object. Hall (1987, p. 25) states, "the visitor is guided to make connections and to follow the development of the thesis as it evolves in the exhibition".

The thematic style parallels Velarde's (1984) and Hall's (1987) thematic concept. This style is based on a story line or a "linear approach" (Hall, 1987, p. 25) presenting objects that are related through a historical incident, natural environment, or conceptual relationship.

Exhibit Mode

Within any exhibit there are many different media of communication. Frequently emphasis is placed on the artifacts, labels, or electronic equipment, but the rest of the exhibit's components also serve as communication media. Thus, exhibit communication is not a single unified message, but a complicated union of messages not unlike a musical composition. There are many layers of messages occurring at all times, and failure to orchestrate them will result in visitor confusion. People will leave saying, "What was that all about?" Since each part of the exhibit transmits something to the visitor, it is important for the developers to choose which aspect, and thus which message, should be emphasized.

As in the other two divisions, exhibit mode is divided into three groups: presentational, informational, and interpretive. Each of the media elements correspond to recognized procedures already used in exhibit design.

Presentational Mode. Within this mode, the layer of the message transmitted by the object is more important than any subsidiary message or interpretation placed in the exhibit by a curator. This is most notable in a work of art. As Noble states, "an artist created his work of art to be viewed by an audience, and he endowed it with a message that will be communicated to its viewer" (1970, p. 20).

Informational Mode. Employing this mode, the labels and/or electronic media are emphasized. These are beneficial in transmitting factual or explanatory material. Traditional

natural history exhibits often use this mode. During the 1950s several writers felt exhibits should reflect research on the object, preferably that being carried on at the museum (Bliss, 1959; Hellmann, 1958; Schmidt, 1958). The informational mode has continued in modified form to the present. However, more recent writers prefer to combine aspect of the informational mode with the interpretive mode (Diamond, Virgason & Ramey, 1979; Kerr, 1986; Lewis, 1980; Noble, 1984).

Interpretive Mode. The emphasis of this mode establishes the overall atmosphere, the milieu, of the exhibit as the primary message carrier. This type is frequently found in historic sites and stresses the entire exhibit as a transmitter of communication while the objects within the exhibit are the focus of that communication. It is important to remember that other message carriers such as labels can also be present, only that emphasis is placed on the atmosphere.

Influencing Factors

In addition to the families of exhibit elements, there exists a series of factors who's effects on the process must also be considered. It is not the purpose of this article to identify all the factors. This would be an impossible task since a list would differ for each museum and each exhibit. Rather, as with the elements of an exhibit, it is the relationships of the factors to the exhibit development process that is of greatest importance. It is possible to divide them into two basic groups. Concrete factors are those quantitative things that can be identified, defined, and measured such as physical constraints

including money, time, and spatial limitations, or empirical data that have been published or identified by in-house evaluation.

However, there are other factors that impinge upon the process. The effects of these factors are more difficult to measure and so are included under the rubric abstract factors. These factors are sometimes the indirect result of forces acting on the profession as well on each individual museum. They may vary in importance from institution to institution, but their overall impact is just as great and just as far reaching as the concrete factors. Although there are additional ones that may have equal or greater influence, this article deals with five such factors. From the most general to the most specific, they are the museum's goals and objectives; the political forces at work both within and outside the museum; the participants, including not only the museum staff, but all the other contributors including the public; the decision-making process; and the subject matter of the exhibit.

Museum Goals and Objectives. While many things in the exhibit development process may seem to lack definite structure, the goals and objectives must be clearly defined and understood. Their methodical fashioning is a primary step in developing a successful exhibit. While the overall purpose of any exhibit is to allow the visitor to explore, synthesize and regenerate her/his perceptions of reality, there must be specific reasons why a topic is chosen. These reasons must be made clear to all concerned, including the public, because they affect the structure and meaning of the entire project. Contrived goals or

goals originated after the fact are less than helpful because they only serve to confuse the situation by misleading developers and visitors alike. Once the goals are specified and stated, the objectives, or statements that identify measurable results, can specify the purposes of individual exhibit parts.

The exhibit's goals and objectives must drive the decision process to its eventual and logical conclusion. It is not sufficient justification to include or exclude an exhibit element because of tradition or the opinions of an influential individual. For instance, there is no rule that says natural history museum exhibits must be didactic. The exhibition of an outstanding artifact collection does not have to be justified by academic disseminations. The intrinsic interest developed by an object (Shettel, 1973) also presents a valid pathway for the visitor to explore.

The goals and objectives of an exhibit serve another purpose. Museums cannot afford to have a multimillion dollar exhibit failure, so there must be evaluation throughout the process. That evaluation should be based on the goals and objectives established early in the process. This should help create solidarity among the team members, in that the evaluation is not intended to "find fault", rather it is an experience that encourages the team members to express positive contributions and creative ideas.

Political Agents. The museum's mission, the ultimate determinant of an exhibit's approach, is the result of decisions made by museum personnel. So, it must, by its own nature, be

reflective of a set of beliefs or values held by those making the decision. While the individuals involved in the decision may try to be objective, personal tastes, the museum's situation, the community profile and societal pressure may influence the decision in a political manner.

As the previous paragraph indicates, both individuals and groups can be influential political forces. They may be more practically grouped as external and internal influences (Mintzberg, 1983). The forces external to the museum may include financial backers, professional associates, employee associations, and the various publics which includes general groups, special interest groups, and the government. On the other hand, internal forces can be composed of the chief executive officer, middle management, professional analysts such as accountants, operations personnel, and the support staff.

Both the internal and external influencers form coalitions to combine power and energy in an effort to affect the course of the organization. Within the internal forces at work in exhibit development, the person with the greatest authority usually has the greatest power. Authority is an example of bureaucratic control (Mintzberg, 1983), but there is also personal influence, which Hare feels may be "the ultimate source of change" (Hare, 1992, p. 30). Of course there is no guarantee that authority and influence will rest in the same person.

Participants. The participants in the exhibition development process are similar to those in any other communication system. At one end are the originators of the

communication, in this case the museum personnel and at the other are the recipients, or visitors. Each group has their own set of priorities, only some of which can be satisfied by an exhibit. However, by identifying and acknowledging the visitor' priorities along with their own, exhibit personnel can produce an exhibit that more effectively communicates its message.

Museums now often use a team approach when developing exhibits. Because of this, many people can be involved in the activities, necessitating a decentralized approach to the development process. The backgrounds, training, and expertise of such people as curators, designers, educators, and specialists must be considered during the development process.

The previous paragraph pertains to only one end of the communication process. The individuals at the other end can be identified through visitor surveys yielding demographic information, but after that a museum must do more to learn what they want from an exhibit. Museums must satisfy viewer needs or attendance will drop.

The Decision-Making Process. The central activity of the exhibit development process is decision-making. Earlier, an analogy comparing exhibit elements and chemical elements was drawn. If that analogy is accurate then exhibit developers can be compared to chemists in that they choose and mix the various elements in the catalytic presence of the influencing factors. Like chemists, they are bounded by restrictions in their methodology. Developers cannot assume that capricious decisions based on approximated experiences and generalized objectives will

yield meaningful results. Rather, successful exhibits are the products of decision-makers that pay careful attention to the influencing factors.

Decision-making is not only a means to solving problems, but it is also an organizational device to get from where one is to where one wants to be. Thus, in museum exhibit development, the decision process acts as the hub of all the associated activities. However, while decision-making is the keystone to exhibit development, its components are not easily identified or categorized. There are many different models of the decision process that deal with these vagaries, but this writer's research indicates the actual process of making decisions within the course of exhibit development may be a gradual evolution of ideas within a general framework that is modified by the team to fit their perceptions. This means it apparently does not matter which decision-making model is employed, as long as one is used. The model is then extemporaneously adapted by the team to fit their personalities and situation.

The Exhibit Subject Matter. The importance of the exhibit's subject on its success is unclear. It certainly has an influence on decisions concerning exhibit elements and other factors, but it also may have a psychological effect on the participants. Museums today need to adapt more than their exhibit techniques to the modern public, they need to consider the subject matter as well. On one hand, the contemporary visitor has a better understanding of global matters than the museums' 19th century visitor. People today have been exposed to the world through

printed matter, television and personal travel. The adventure of seeing a stuffed zebra is no longer there. On the other hand, exhibits that are very narrow in scope appeal to only a hand full of people and promote the appearance of elitism.

Traditional topics sometimes limit the freedom of creative thought; on the other hand, new subjects often encourage new treatments. Exhibits that place modern problems in historic perspective, conceptual exhibits, comparative exhibits, contrastive exhibits, and speculative exhibits are all ways of encouraging the visitor to explore the modern world. Part of the interest in visiting museums today is not just the special effects, block-buster exhibits, walk-through dioramas and Omni-Max theaters, but the relevancy of the exhibit subjects to the world around us. It is not suggested that museums should consider only themes already popular with the public, but a blend of themes should be considered.

Summary

Museums are in the midst of change. They are responding to societal pressures that appear in the forms of financial crises, political revolutions, a rapid and fundamental change in information technology, the restructuring of community ethics and morals, environmental crises, defused educational goals and a rising awareness of long-standing inequities between social groups. At the same time, they are trying to remain true to the

traditional functions of a museum that have evolved over the last hundred years.

This dualistic, almost schizoid, situation makes itself clear in many areas of museums, but no more so than in exhibitions. The urge to address time honored ideas with cutting edge technology is at best a stop-gap response. Instead, there is a need to develop a holistic approach to exhibit development. The project's participants must be willing to view electronic media, design style, label copy, subject matter and all of the other physical pieces of the exhibit as elements of the whole. No single aspect can exist without affecting or being affected by the other parts. Likewise, participants in the process must not see themselves only as specialists who act in isolation, but as team members who must contribute in many different ways. Finally, each act from the exhibit proposal to the opening ceremonies is interrelated.

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